REMARKS

I. Introduction

Claims 179 to 181 and 183 to 203 are currently pending in the present application, since claims 1 to 178, and 182 were previously canceled. In view of the foregoing amendments and the following remarks, it is respectfully submitted that all of the presently pending claims are allowable, and reconsideration of the present application is respectfully requested.

Applicants thank the Examiner for considering the previously filed Information Disclosure Statement, 1449 papers, and cited references.

II. Objection to the Specification

The Office Action objects to the Specification as assertedly failing to include an Abstract that begins on a separate sheet in accordance with 37 C.F.R. § 1.52(b)(4). Applicants respectfully traverse this assertion. Applicants filed a Substitute Specification on June 25, 2002, which included an Abstract that commenced on a separate sheet – page 64. This Abstract was later amended by a replacement Abstract in Applicant's Response dated September 28, 2006. Accordingly, it is believed that no amendment is necessary.

III. Claim Objections

The objection to claim 203 has been obviated by the included listing of claims.

IV. Rejection of Claims 179, 181, 185, 187, and 188 Under 35 U.S.C. § 102(e)

Claims 179, 181, 185, 187, and 188 stand rejected under 35 U.S.C. § 102(e) as anticipated by U.S. Patent No. 5,966,534 ("Cooke et al."). It is respectfully submitted that Cooke et al. do not anticipate any of claims 179, 181, 185, 187, and 188 for at least the following reasons.

Claim 179 relates to a method for programming a system having a configurable cellular structure and, as herein amended without prejudice, recites, *inter alia*, the following:

> *. . . separating the control flow graph into a plurality of subgraphs; distributing the plurality of subgraphs among a plurality of programmable hardware modules; determining state information for each of the subgraphs; and transferring the state information determined for one of the subgraphs from the one of the subgraphs to a subsequently executed subgraph.*

Cooke et al. do not disclose, or even suggest, transferring state information determined for one subgraph from the subgraph to another subgraph. Thus, Cooke et al. do not disclose, or even suggest, all of the features recited in claim 179, so that Cooke et al. do not anticipate claim 179.

Claim 181 relates to a method for programming a system having a cellular structure and, as herein amended without prejudice, recites, *inter alia*, the following:

> *. . . separating the at least one of the graphs into a plurality of subgraphs; and distributing the plurality of subgraphs among a plurality of hardware modules; wherein the separating includes providing communication arrangements adapted for storage of all data to be processed in a subsequent hardware module according to connections between the plurality of subgraphs.*

Cooke et al. do not disclose, or even suggest, separating a graph into subgraphs, where the separation includes providing communication arrangements adapted for storage of data to be processed in a subsequent hardware module according to connections between the subgraphs. Thus, Cooke et al. do not disclose, or even suggest, all of the features recited in claim 181, so that Cooke et al. do not anticipate claim 181.

As for claims 185, 187, and 188, which depend from claim 181 and therefore include all of the features recited in claim 181, it is respectfully submitted that Cooke et al. do not anticipate these dependent claims for the same reasons set forth above in support of the patentability of claim 181.

Withdrawal of this rejection is therefore respectfully requested.

V. Rejection of Claim 180 Under 35 U.S.C. § 102(b)

Claim 180 stands rejected under 35 U.S.C. § 102(b) as anticipated by U.S. Patent No. 5,418953 ("Hunt et al."). It is respectfully submitted that Hunt et al. do not anticipate claim 180 for at least the following reasons.

Claim 180 relates to a method for programming a system having a configurable cellular structure and, as herein amended without prejudice, recites, *inter alia*, the following:

> *. . . extracting a data flow graph of a program that includes a loop; separating the data flow graph into a plurality of subgraphs, such that the loop is split into several of the subgraphs; and distributing the plurality of subgraphs among a plurality of hardware modules, such that the several subgraphs of the loop are distributed among at least two of the hardware modules.*

Hunt et al. do not disclose, or even suggest, distribution of several subgraphs of a loop among hardware modules, as provided for in the context of claim 180. Thus, Hunt et al. do not disclose, or even suggest, all of the features recited in claim 180, so that HUnt et al. do not anticipate claim 180.

Withdrawal of this rejection is therefore respectfully requested.

VI. Rejection of Claims 190 to 193 Under 35 U.S.C. § 102(b)

Claims 190 to 193 stand rejected under 35 U.S.C. § 102(b) as anticipated by U.S. Patent No. 5,327,125 ("Iwase et al."). It is respectfully submitted that Iwase et al. do not anticipate any of claims 190 to 193 for at least the following reasons.

Claim 190 relates to a method of executing a single program on a system having an array of runtime reconfigurable cells and, as herein amended without prejudice, recites, *inter alia*, the following:

> *. . . separating the single program into several subgraphs; distributing the several subgraphs among different cells of the array; and executing the several subgraphs via the cells, the executing including: transmitting a data signal from a first cell via which a first one of the subgraphs is executed to a second cell via which a second one of the subgraphs is executed; and transmitting a status with the data signal, the status indicating whether the data signal is valid.*

Iwase et al. do not disclose, or even suggest, transmitting a data signal and status signal from a first cell via which a first subgraph is executed to a second cell via which a second subgraph is executed. Thus, Iwase et al. do not disclose, or even suggest, all of the features recited in claim 190, so that Iwase et al. do not anticipate claim 190.

As for claims 191 to 193, which ultimately depend from claim 190 and therefore include all of the features recited in claim 190, it is respectfully submitted that Iwase et al. do not anticipate any of these dependent claims for the same reasons set forth above in support of the patentability of claim 190.

Withdrawal of this rejection is therefore respectfully requested.

VII. Rejection of Claims 194 to 202 Under 35 U.S.C. § 102(b)

Claims 194 to 202 stand rejected under 35 U.S.C. § 102(b) as anticipated by U.S. Patent No. 4,972,314 ("Getzinger et al."). It is respectfully submitted that Getzinger et al. do not anticipate any of claims 194 to 202 for at least the following reasons.

Claim 194 relates to a method of executing a program on a runtime reconfigurable array of cells and, as herein amended without prejudice, recites that state information determined for one of the subgraphs is transferred from the one of the subgraphs to a subsequently executed subgraph.

Getzinger et al. do not disclose, or even suggest, transferring of state information determined for one subgraph from the subgraph to a subsequently executed subgraph. Thus, Getzinger et al. do not disclose, or even suggest, all of the features recited in claim 194, so that Getzinger et al. do not anticipate claim 194.

As for claims 195 to 202, which ultimately depend from claim 194 and therefore include all of the features recited in claim 194, it is respectfully submitted that Getzinger et al. do not anticipate either of these dependent claims for the same reasons set forth above in support of the patentability of claim 194.

Withdrawal of this rejection is therefore respectfully requested.

VIII. Rejection of Claims 183, 184, and 186 Under 35 U.S.C. § 103(a)

Claims 183, 184, and 186 stand rejected under 35 U.S.C. § 103(a) as unpatentable over the combination of Cooke et al. and U.S. Patent No. 6,421,809 ("Wuytack et al."). Without addressing whether Wuytack et al. qualifies as prior art with respect to the sections of Wuytack et al. relied upon by the Examiner, it is respectfully submitted that the combination of Cooke et al. and Wuytack et al. does not render unpatentable any of claims 183, 184, and 186 for at least the following reasons.

Claims 183, 184, and 186 depend from claim 181 and therefore include all of the features recited in claim 181. Wuytack et al. do not correct the deficiencies noted above with respect to Cooke et al. It is therefore respectfully submitted that the combination of Cooke et al. and Wuytack et al. does not render unpatentable these dependent claims for the same reasons set forth above in support of the patentability of claim 181. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988) (any dependent claim that depends from a non-obvious independent claim is non-obvious).

As further regards claim 186, it is further noted that column 3, lines 8 to 29 and column 9, line 66 to column 10, line 14 of Wuytack et al., relied upon by the Office Action as assertedly disclosing memory elements adapted to save data passed between subgraphs, the cited sections merely discuss scheduling of memory accesses so as to avoid conflicts, but do not at all relate to subgraphs or saving of data passed therebetween. For this additional reason, the combination of Cooke et al. and Wuytack et al. does not render unpatentable claim 186.

Withdrawal of this rejection is therefore respectfully requested.

IX. Rejection of Claim 189 Under 35 U.S.C. § 103(a)

Claim 189 stands rejected under 35 U.S.C. § 103(a) as unpatentable over the combination of Cooke et al. and U.S. Patent No. 6,301,706 ("Maslennikov et al."). It is respectfully submitted that the combination of Cooke et al. and Maslennikov et al. does not render unpatentable claim 189 for at least the following reasons.

Claim 189 depends from claim 181 and therefore includes all of the features recited in claim 181. Maslennikov et al. do not correct the deficiencies noted above with respect to Cooke et al. It is therefore respectfully submitted that the combination of Cooke et al. and Maslennikov et al.

does not render unpatentable this dependent claim for the same reasons set forth above in support of the patentability of claim 181. *In re Fine, supra.*

Withdrawal of this rejection is therefore respectfully requested.

X. Rejection of Claim 203 Under 35 U.S.C. § 103(a)

Claim 203 stands rejected under 35 U.S.C. § 103(a) as unpatentable over the combination of U.S. Patent No. 5,537,580 ("Giomi et al.") and U.S. Patent No. 6,438,747 ("Schreiber et al."). It is respectfully submitted that the combination of Giomi et al. and Schreiber et al. does not render unpatentable claim 203 for at least the following reasons.

Claim 203, as herein amended without prejudice, relates to a method for programming a system having a runtime configurable cellular structure. Giomi et al., on the other hand, concerns a method of fabricating an ASIC. The steps of Giomi et al. therefore have nothing to do with claim 203.

Further, claim 203, as herein amended without prejudice, recites, *inter alia*, the following:

> *. . . the distribution of the plurality of subgraphs includes adapting the plurality of hardware modules such that state information determined for a first one of the subgraphs is transferred from the first one of the subgraphs to another subgraph that is to be subsequently executed.*

Giomi et al. do not disclose or suggest adapting hardware modules such that state information determined for one subgraph is transferred from the subgraph to another subgraph that is to be subsequently executed. Schreiber et al. do not correct these critical deficiencies of Giomi et al.

Thus, the combination of Giomi et al. and Schreiber et al. does not disclose or suggest all of the features of claim 203. Accordingly, the combination of Giomi et al. and Schreiber et al. does not render unpatentable claim 203.

Withdrawal of this rejection is therefore respectfully requested.

XI. Conclusion

In light of the foregoing, it is respectfully submitted that all pending claims are in condition for allowance. Prompt reconsideration and allowance of the present application are therefore earnestly solicited.

Respectfully submitted,

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